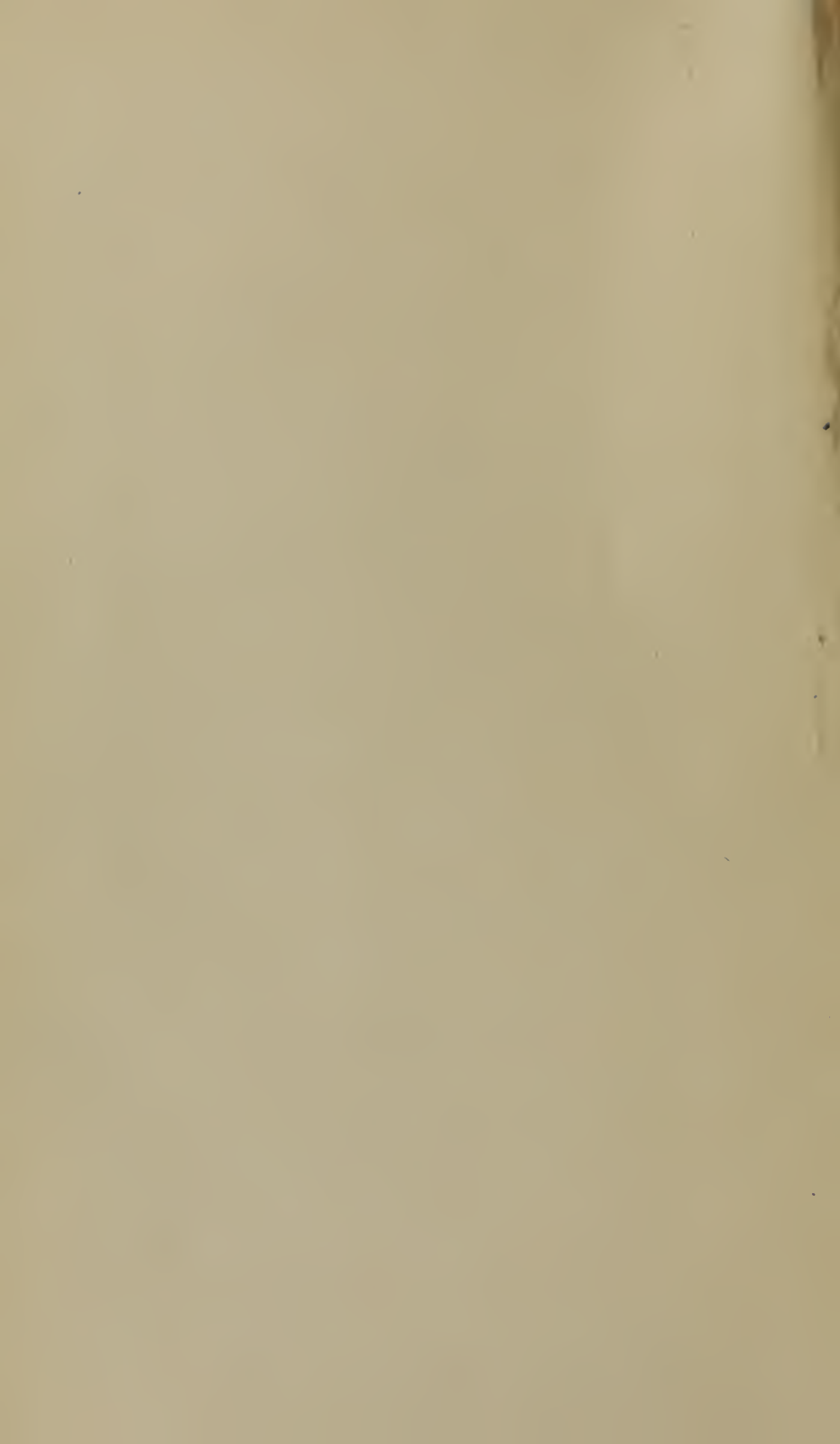


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BRIEF DESCRIPTION

OF THE

YELLOW FEVER,

AS IT PREVAILED AT

Mt. Pleasant and in Charleston Harbor

DURING THE SUMMER OF 1857.

✓ BY

R. A. KINLOCH, M.D.

(Extracted from Jan. No., 1858, of Charleston Medical Journal and Review.)

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## KINLOCH ON YELLOW FEVER.

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A BRIEF DESCRIPTION *of the Yellow Fever as it prevailed at Mount Pleasant and in Charleston Harbor during the Summer of 1857, with a Critical Inquiry into its Probable Origin.* By R. A. KINLOCH, M.D., of Charleston, S. C. [For table of winds during months of July and August, and relative position and distances of places mentioned, see note at end of article.]

The announcement of Yellow Fever at Mount Pleasant startled the inhabitants of that town, and caused no little excitement among the people of our city. This was natural. A fearful disease, too well known in our locality, had appeared upon a new spot, one believed heretofore to be exempt from its visitations, one looked upon by our citizens as a place of sure refuge, though pestilence should stalk wildly through our streets. Accidentally I discovered the existence of the disease, and the duty devolved upon me to announce the fact. It was my lot, in consequence, to be a little derided, suspected of ignorance, and considered an alarmist. This, too, was natural. Conscious of the mightiness of truth, I was content calmly to bide the decision which time would pronounce. This decision was not long withheld, and, being in my favor, I feel that I am the proper person to tell the profession something of the disease as I saw it, and particularly to give them my impressions of its origin. It will be a source of much regret if anything that I may say should grate harshly upon the

ears of the inhabitants of the town where the disease prevailed; nevertheless, truth shall be my only guide—I follow her wherever she may lead.

I conceive this epidemic (if it can be so called) of Yellow Fever to be far more interesting to the profession, and to the community of our city, than any visitation of the disease that the city herself has ever sustained. A careful investigation of the origin of Yellow Fever upon this new and contracted spot may decide questions that have been long agitating our community, and concerning which a truthful decision is of immense importance to our future welfare. In inquiring into the origin of epidemic diseases, a thousand difficulties beset our path. The slothful indifference of men, their ignorance, their conflicting interests, their love of ambition, their low standard of morality, may be mentioned as some of these. Early cases of the disease are overlooked, accidentally or designedly, and historians of the epidemic begin to count when the progress of the pestilence has brought confusion in its march. We find one beginning at one point, another at another, according as it may suit the preconceived views of each. Such obstacles may be encountered with more success when disease commences in a small village, than when it begins in a large city. The ignorance or the villainy of men can be more readily detected; facts cannot so easily escape observation; truth may be more definitely approached, and science may expect to gather a richer harvest. I feel, then, the importance of my office, and, so far as I am able, shall endeavor to do my duty.

For the benefit of readers not familiar with the localities about our city, I will give a very brief description of the town or village of Mount Pleasant. It is a lovely spot upon the eastern bank of the Cooper River, directly opposite the city of Charleston, and distant about two and a half, or three miles east of the city. The town occupies an elevated and sandy point of land, about a mile in length, and a quarter of a mile in breadth. This is triangular, however, in shape, and bounded on the west by the Cooper River, on the south by the waters of the bay, on the north and east sides by



the continuous wood-land. Upon the soil there is but little undergrowth, while trees, chiefly of oak and pine, are only numerous enough for ornament, and protection from the summer sun. The adjacent land to the east and north is also sandy, and for the most part high. This is abundantly supplied with vegetation, both large and small: the oak, the pine, the hickory, and the chinquepin flourish as is usual in our Southern woods. A settlement has long existed at "the point," but it is only within ten years that this has materially increased in size. It now contains some two hundred houses, and has a summer population of about a thousand or twelve hundred inhabitants. For the most part the houses are sparsely scattered, most of them having large lots, and a few having gardens attached. Latterly, walks and roads of plank and of shell have been constructed through the main thoroughfares of the place, and there has been evinced a disposition to divide the lots, and to build more closely, as the land has become more valuable. The place has long enjoyed a high reputation for salubrity. To it the planters from the country, for many miles around, have been accustomed to resort during the summer and fall months, to escape the malaria which endangers life upon the plantations. Many persons from the city visit it temporarily for recreation and for health. Some few families reside permanently at the village, and within a few years it has become fashionable for business men of our city to make it their residence, they coming to the city daily, and returning after business hours. The number of these latter promised to increase with the increasing popularity of the place. Frequent communication between the town and the city is insured by a ferry which has been in existence ten years; steam-boats pass to and fro every alternate hour during the day. Thus it must be observed that the inhabitants of the city are constantly recreating at the village, and the people of the village are often breathing our city atmosphere. No quarantine regulations have ever existed to prevent this constant intercourse. For reasons hereafter to be seen, let me say that the inhabitants of Mount Pleasant may be divided into three classes. First, *strangers*, persons who have lived there

but a short time, and who, coming from abroad, or from the interior of our country, may be considered altogether unacclimated to our city atmosphere. The children may be classed under this head. Second, adult natives of our city, who have but recently moved to the village, and not yet lost their city acclimation, and all other persons acclimated to Yellow Fever. Third, old residents of the village who have been accustomed for many summers to make frequent visits to the city for business or pleasure. These occupy an intermediate position, and may be considered *partially acclimated* to a Yellow Fever atmosphere.

I have said that the village had been long noted for its salubrity. I must qualify this remark by stating that some situations have been looked upon with suspicion. The old inhabitants remember that in certain seasons cases of bilious remittent have occurred upon these spots, and usually when the prevailing winds were from the east. It is said that as far back as 1828 a respectable lady died at the settlement with what the physician attending called bilious fever, ending in black vomit. And in 1833 another case of the same kind is said to have happened. In late years though (I except the disease occurring last year in Mr. Morrison's family, of which I shall again speak) a remarkable immunity from malarial disease has been enjoyed. In proof of this I would say that every white inhabitant of the place is a fit subject for malarial fever, and no one of them could have remained in the country outside of the limits of the village without running the risk of taking a "remittent." As to the Yellow Fever, I found during my visits to Mount Pleasant, when investigating the occurrences about which I am now writing, that no one of the inhabitants credited the suspicion of such a disease ever having before originated there. It had never prevailed there, even while the most devastating epidemics of the disease were raging in our city. During many of these periods a case or two of the fever had been seen at the village, but only in persons who had ventured upon visiting the city. *From these the disease never extended by personal contagion. The infected atmosphere of the city was never known to have reached*

*the village by the steam-boats. The contagionists had to consider the atmosphere of Mount Pleasant one in which Yellow Fever could not propagate.* For reasons which will appear hereafter, and which I became fully possessed of after the Yellow Fever of which I am now writing was discovered, it would seem probable, notwithstanding the general opinion to the contrary, that Yellow Fever, to a very limited extent, occurred at Mount Pleasant in the summer of 1856.

During the past summer, up to the time when I first visited Mount Pleasant, our city had been perfectly free from even a suspicion of Yellow Fever. We had enjoyed during the whole season an unusually delightful atmosphere. The most experienced and observant of our medical men never for a moment expected fever. Two cases of Yellow Fever, however, were carried to the Marine Hospital on the 27th of August, from the *Johannes*, a vessel from a European port, then lying in the Ashley River, and which had remained the usual time at quarantine, on account of "ship fever." These were considered directly traceable to the *Koophandel*, a vessel at quarantine, from an infected port. So soon as the diagnosis was made out, which was not until the day after the men entered the hospital, these patients were sent back to the vessel, where one of them died; the other reached the Lazaretto, and there died. *There was no extension of the disease by personal contagion or otherwise.* Two other cases of Yellow Fever were reported by one of our city physicians familiar with the disease, as occurring on board of the *San Juan*, while anchored in the Cooper River, about half a mile from the city, and opposite the upper wharves. This vessel arrived from San Juan, a healthy port, and anchored at the quarantine ground on the 12th of July. She remained there until the 27th of August, when she left the ground and took a position up the river, as above indicated. Her crew were frequently ashore in the city. On the 2d of September the physician saw the first case of disease; the patient had been sick for two days. On the third he visited the second case. Both cases terminated fatally, after five or six days' sickness. Neither of them had black vomit. One body was interred at the Lazaretto station; the other, with

some three hundred pounds attached, was sunk in "Hog Island Channel"—which runs parallel with, and near the shore of Mount Pleasant—on account of an accident which happened to the boat's crew, engaged to inter it, or to deposit it in deep water. In this connection I may at once state that three other vessels passed from the quarantine ground, up the Cooper River, and occupied positions less exposed to strong winds and rough weather. In accomplishing this change of position, they passed much nearer to the city than to Mount Pleasant. At no time could they have approached nearer than within a mile and a half of the latter place. When occupying their final position off "Hobcaw Point," they were distant some two and a quarter miles north west from "Haddrell's Point," the western extremity of Mount Pleasant shore, projecting into the river. The three vessels alluded to were the *Ciscar*, from Havana—she arrived at quarantine on the 8th of July, with four cases of Yellow Fever on board, which were removed to the Lazaretto; the vessel went up the river on the 17th of August, after having been cleansed and fumigated under the direction of the Port Physician;—the *Luisita*, from Porto Rico, a healthy port,—she arrived at quarantine on the 26th of July, and went up the river on the 4th of September;—the *Adella*, from Havana,—she arrived at quarantine on the 31st of July, had no sickness on board, and went up the river on the 12th of September. So much I think proper to refer to as preliminary. I shall have occasion again to allude to several of these vessels.

On Monday, the 21st of September, I was requested to visit Mount Pleasant to see, in consultation with one of the physicians of that place, Mr. Lofton, who was said to be ill with "bilious congestive fever;" and also to take charge of a son of Mr. Lofton's, who had been taken sick the night before with the same disease. I was informed, before reaching the town, that there had been four deaths in quick succession in Mr. Lofton's household—his wife, two children, and a servant had fallen victims to the disease. Knowing the healthfulness of the place, this news rather surprised me; but still I went, expecting to see bilious remittent fever existing upon one of



the suspicious spots upon the land-side of the town to which I have alluded above. First, I was surprised to find the sickness in a central portion of the settlement; and next, upon entering Mr. Lofton's room, I was more than astonished at the appearance which he presented. *The surface of his body was quite yellow; the conjunctivæ of an orange hue; bloody sordes was about his teeth, and bloody crusts at the corners of his mouth; a blistered surface upon the abdomen had apparently been oozing blood; he was in a state of restless delirium; he hiccupped often, and seemed disposed to vomit; his bladder was empty, although he had passed no urine for over twelve hours. I was informed that his intellect had been clear up to a short time previous to my visit.* I watched this man for some time, expecting to see black vomit come from his stomach. I wanted no more perfect picture of the third stage of Yellow Fever. My suspicions were roused, and I determined to seek an opportunity the next day to make an autopsy, and see how far the internal and external appearances corresponded with each other. Upon my visit to the son, on Tuesday morning, I learned that Mr. Lofton had died the evening previous. Consent being obtained, I proceeded to make an autopsy, examining only the abdominal organs, as my time was limited. The stomach was found to contain nearly half a pint of black vomit; the mucous membrane of this organ was congested in patches, and at some points presented the peculiar dark color which might lead one to say that the black matter was traceable into the vessels. The intestines, both large and small, contained some black matter. The liver was most decidedly of the "yellow" or "buff color" described by Louis. The bladder was empty and contracted. The other abdominal organs presented nothing peculiar. To one conversant with the pathological appearances presented after death, from Yellow Fever, I need scarcely say that my first suspicions were amply corroborated, and I felt little hesitation in deciding that Mr. Lofton died of Yellow Fever. The only question for solution was the diagnosis of Yellow Fever from bilious remittent. I had to come to a conclusion, from the history of the particular individuals who had suffered from

the disease, from the symptoms during life, and the appearances after death, of the particular case seen by myself. Had I received any positive and accurate statement—which I did not—as to the fever in question presenting a remittent type, I don't think that my after conclusions would have been modified. I admit the fact that Yellow Fever is of the continued type, and thus, in most instances markedly separable from periodic fever; but experience has long since taught me that we cannot trust to this alone in making a diagnosis, particularly when the information comes from the observation of another. The most observant practitioners sometimes believe that they notice remissions in Yellow Fever. During epidemic visitations of this disease in our city, I have seen practitioners, who rely too much upon this one feature, deceived in their diagnosis, and this, too, when there was not the slightest reason for believing in any malarial complication. There was no blending of types, no complication of one disease with the other, but the disease was Yellow Fever from the beginning to the end. I say this as a practical man, and independent of the doctrine of the books, or of the opinion of others. Any information, then, that I might have received in reference to the type of the fever I was investigating, I should have taken *only for what it was worth in connection with other facts.*

The family of Mr. Lofton, I found, were strangers to our seaboard. They were altogether unacclimated to a Yellow Fever atmosphere, but had been previously exposed to malarial influences. They had lived more in the interior of the State, in St. James, Santee, on the edge of "Hell-hole Swamp," a notably malarial section. It struck me at once as singular that these people should come to a healthy village and die of malarial fever. Could it be that they brought with them the old leaven from the swamp, and that this now, under the influence of a salubrious atmosphere, had been converted into a poison powerful enough to destroy? I had heard that the remittent of our seaboard was more severe than that of the interior; but could it be possible that the morbid cause of such a disease could thus spring up suddenly in a salubrious



village, and seize and destroy by preference those who all their lives had been resisting the same noxious agent generated in the swamp? I doubted such a possibility, and this strengthened my doubts as to the disease being remittent fever. Next, the symptoms presented by Mr. Lofton, and the post mortem appearances, had to be considered. To any one of the symptoms, taken alone, I should have attached little importance in a diagnostic point of view; but taken collectively, they afforded strong evidence. I venture to say that it would be considered remarkable by any practitioner, however experienced in remittent fever, to meet with a case of this disease presenting all the features I have detailed above. And so with the post mortem appearances. Black vomit has been seen, according to good observers, in remittent fever, as, also, in some other diseases, and it may then be found after death in such cases. But how rare is the connection of black vomit with remittent fever! It is much more talked of than seen. Hosts of practitioners in malarial districts have never seen it. Two members of Mr. Lofton's household who died previous to him had vomited black matter, but this had not attracted any special attention at the time. Here, then, were three persons in one family dying of fever, with attendant black vomit. Was such an occurrence ever met with in bilious fever? But some may ask if this was the black vomit of Yellow Fever. I had not seen the vomit from the first two patients, and had to show only what I procured from the autopsy of Mr. Lofton. I profess to distinguish no certain difference in the appearances presented by the black vomits met with in various diseases, when the basis of the material is blood from the stomach. A distinguished authority in our city, however, upon inspecting some of the vomit from Mr. Lofton's stomach, first pronounced it to be from an old drunkard; and after being told that Mr. L. had been a very temperate man, he, after a chemical examination, considered it the vomit of "*imitative Yellow Fever*," the Yellow Fever that "*does not spread*." But unfortunately, as I shall show presently, this disease did spread; and then only was my scientific friend willing to admit that the disease of which Mr. Lofton died was genuine West India

yellow fever, and consequently, according to his view, imported. Now I have scarcely a doubt that many a sporadic case of yellow fever has been put down as bilious fever ending in black vomit. Nor have I a doubt of the identity of my scientific friend's "imitative yellow fever" and the disease that killed poor Mr. Lofton.

Next, I considered the condition of the liver a strong evidence against the disease being remittent fever. I cannot go as far as some observers who look upon the "buff" or "box-wood" liver as pathognomonic of yellow fever. I notice that only recently a distinguished physician near home, Dr. Arnold, of Savannah, advances the opinion in reference to the fever as he has seen it in his own city. Charleston yellow fever, then, differs in this respect from that of Savannah, for I have repeatedly failed to find the "buff" liver after death from this disease. I admit, though, that these cases are exceptional. A question of even more interest to decide, is the condition of the liver after death from bilious fever. The investigations of Drs. Stewardson and Swett would lead us to believe that the "bronze liver" was the liver of this fever. It would seem that this, too, must be received with some qualification, for Chervin, Nott, and others, have found the yellow liver in intermittents and remittents.\* Dr. Morehead also presents us, in his recent work upon the diseases of India, with an account of several autopsies of remittent fever in which the liver was "yellow." We want more extensive investigations in reference to this interesting question. To return from this digression, let me say, then, that the "buff liver" being met with so commonly in yellow fever, and so seldom in bilious fever, did, when connected with the other symptoms and appearances, furnish most convincing evidence that Mr. Lofton died of yellow fever. Soon I had further opportunities of seeing the disease, and satisfying myself of the correctness of my diagnosis. John, the son of Mr. Lofton, was, as I mentioned above, put under my care. He was watched closely, and no semblance of a remission was observable in the febrile

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\* La Roche on Yellow Fever.

paroxysm. This lasted about sixty hours, and then gave place to the stage of calm, from which my patient passed into convalescence. He was attacked on the 20th of September, and discharged on the 28th. Miss Lofton, the sister of John, was the next case I attended. She was seen on the evening of the 23d, early after the access of the febrile paroxysm. By energetic treatment with calomel and quinine in large doses, this was "*resolved*" at the expiration of twenty-six hours. She passed smoothly into convalescence, and was discharged also on the 28th. On Saturday, the 26th of September, I saw, accidentally, with Dr. Evans, the attending physician, the daughter of Mr. Gregory, aged three or four years. She was said to be dying of black vomit. I found this report too true. She presented a striking picture of yellow fever in its third stage. She was quite yellow; in a state of restless delirium, turning and tossing about the bed; her linen was smeared with the black vomit she had brought up; and from her eyes there trickled away tears of blood. I never witnessed a more distressing and impressive scene. The sight of it was enough to convince any one that there was something more than bilious fever at Mount Pleasant. This sweet child died the same evening.

On Sunday, the 27th, I visited Miss Tew, a young lady of fifteen, in consultation with Dr. Evans. This case furnished another distressing picture of the disease in its third stage. Black vomit had just commenced, and congestion was making rapid progress. She died delirious the same evening, having been sick since Thursday, the 24th. The same day I saw, with Dr. Evans, Miss Pooser, who had been sick since Friday. She was an entire stranger to our seaboard. When seen by me, the febrile paroxysm seemed to be declining. Upon my second visit, the day following, the stage of calm was well marked. This lasted several days, during which time I could scarcely say how the balance would turn. It was a hard struggle, but finally Miss P. recovered. It would serve no useful purpose to enter into the detail of more cases. These will suffice to show what was unequivocally the character of

the disease which so suddenly appeared where it was so unexpected. It was destined, too, to make some progress. This, however, was never with the rapidity that is often witnessed in closely built cities; nor at any time were there a large number of cases under treatment. The disease hovered over the town for about two months, stopping here and there to struggle for a victim. Cases occurred at numerous points far removed from each other. It seemed, however, singular enough that the front houses, those along the river, were entirely exempt; not a single case of fever originated in one of these. It would be difficult to say how the disease spread, for in so limited a settlement the distances from point to point are so short, that the supposition of an infected atmosphere might account for all the cases. Still, persons were not without their notions in this matter. Three of the cases I have detailed above were at once attributed to the fact of some male member of the family having been in attendance upon Mr. Lofton, administering to his wants. I shall not affirm or deny anything upon this point, but simply give the following facts that came under my observation:

First. I met several times in the house, and in the rooms where I attended Mr. Lofton and his son, a number of persons of the *partially acclimated* class. I know of but a single one of these who sickened.

Second. While in attendance upon the daughter of Mr. Lofton, I observed her younger sister at her bed-side, and upon her bed, playing with her affectionately. Their constant companionship was not interrupted, but the younger girl never sickened.

Third. An elder brother of these girls never took the disease, although he assisted to nurse his father and his younger brother.

Fourth. The last white male in the town who suffered from the fever, was a gentleman who was frequently with Mr. Aldrich during his sickness, (the reader will presently see that Mr. A.'s case was the second, if not the first, that occurred at Mount Pleasant,) and helped to lay him out after his death.

Fifth. The very last case of the disease known in the town, was that of a lady who had a daughter ill of the fever fully a month prior to her own attack.\*

The disease exhibited a singular preference for the class that I have denominated *unacclimated*. I know of no *acclimated* persons suffering, and but few of the *partially acclimated*. This I consider strongly significant of the character of the disease. Had it been bilious fever, all would have been alike subject. The whole number of cases may be given approximately at forty. The mortality was chiefly among the earlier cases, and amounted only to eleven. Six of these patients had black vomit. In one of the remaining five it was found after death—this was the only autopsy made. Of those recovering, only one had black vomit, but several passed it by stool. It is quite probable that the whole number of cases would have been greater, had all the inhabitants remained at the town. But such was not the case. Although my opinion had at first been disregarded, after a little time the movement towards the city attested the fact that many of the incredulous began to believe the truth. Never before was witnessed the strange anomaly of people flying to the city, in September, to escape yellow fever. Among the number of the inhabitants who fled, I am not aware of any one suffering from disease manifesting itself after departure. Two cases terminated fatally in the city, but in both of these persons the seizure occurred at Mount Pleasant. One of them was moved to the city when in the second stage of the disease. One individual, a passer only through the town, slept but a single night at the house of Mr. Lofton during the prevalence of disease there, and reached his home on Santee, to die within seven days after his arrival, bleeding from several of the mucous membranes.

To come to some conclusion with regard to the origin of the disease, it was necessary to establish the first case. This was my endeavor, so soon as I had decided upon the diagnosis. The physicians of the village were first appealed to. A care-

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\*Since the above was written, two more cases are said to have occurred.



ful inquiry was made as to the existence of sickness of any kind during the summer, and up to the time of my first visit. I sought information concerning the recent deaths that had occurred. No severe or suspicious sickness had been known up to the 20th of August. The influenza, however, had lately become general, and was still prevailing. This disease, I may remark, was likewise very prevalent in the city. The first case of severe disease was seen by Dr. Williams, in the infant of Mr. Lofton, on the 21st of August. This child was taken suddenly sick the day before. It suffered from a severe exacerbation of fever, with great tendency to cerebral congestion, and died on the 24th of August, without presenting any other symptoms of a suspicious character. On the 8th of September Dr. Williams saw and prescribed for Mr. Lofton's son Joe, and his servant Mary Ann, both sick with fever. On the 9th his servant Joe was prescribed for, and he died on the 11th, of black vomit. Another son, Robert, was prescribed for first on the 10th, and died on the 18th. Mrs. Lofton was the next; she was prescribed for on the 11th, and died of black vomit on the 14th. Several other servants were sick with mild attacks of fever; all of these recovered, and so did the son Joe and servant Mary Ann alluded to above. Then we come to Mr. Lofton himself, whose case I have already described in full. So much for this family. But I found that the early cases were not all furnished by the Lofton people. I had heard of the death, on the 6th of September, of the son of the Rev. Mr. Aldrich, who, with his family, had come from the interior of the State to spend a summer for the first time at Mount Pleasant. The death of this *stranger* at this particular time excited my suspicions. I received all kinds of accounts from different persons as to the cause of his death. At last I heard that two of our city physicians had visited him during his sickness. These gentlemen I at once sought out. One of them I knew to have had large experience both in yellow fever, and in bilious remittent. I learned that he had only seen young Aldrich when his disease was far advanced, and consequently he could say nothing as to its type. He at once affirmed, however, that the young man's appearance was



that of the third stage of yellow fever. His intellect was clear; he was quite yellow, and there was a hemorrhagic appearance about the mouth and the blistered surfaces. The other practitioner of our city, a relative of Mr. Aldrich, informed me that young Aldrich died of bilious congestive fever. I afterwards learned that this name had also been given to the disease by one of the physicians at Mount Pleasant. After my statement of what I had observed at Mount Pleasant, this city physician, last referred to, informed me that he had attended two of Mr. Aldrich's daughters, after the death of his son; and that these girls, both of whom recovered, *did have yellow fever*. Now, put together these facts and statements, and what do we make of them? Young Aldrich died from fever on the 6th of September. He was taken sick on the 28th of August, and before death he presented all the appearances of the third stage of yellow fever. Three days after his death, brings us to the date of the fourth case occurring in the Lofton family; the first which terminated in black vomit. One day after this again, we find one of the sisters of young Aldrich sick, and then in two days more another one, with what the physician in attendance now admits to have been yellow fever, and at the same time other cases of black vomit are seen in the Lofton family. What stronger evidence could we have that young Aldrich suffered from the same disease as did his sisters, and the same disease that afflicted the Loftons! I say this without meaning any disrespect to the attendant of young Aldrich, who is disposed to an opinion at variance with my inferences—“*errare est humanum!*”

Admitting, then, that young Aldrich died of yellow fever, we must consider his case the second, if not the very first, that occurred at Mount Pleasant. The infant of Mr. Lofton which died on the 24th of August, is the only one that could take precedence. It may be doubted by many if this was a case of yellow fever; but we can offer no good evidence to disprove the fact. The physician who saw the sick infant is of opinion that it died of the same disease as the other members of the family. At first I thought the long interval that intervened between the 20th of August, the date of the

infant's attack, and the 8th of September, the date of the occurrence of the second case in the Lofton family, opposed to the idea of the identity of the diseases. But upon looking to the Aldrich family, by way of comparison, I found that there was not much difference in the length of the interval intervening here between the periods at which young Aldrich and his sisters were respectively attacked. The first was attacked on the 28th of August, the second on the 10th of September, and the third on the 12th of the same month. I refer to the priority of these two cases only to be accurate in my account of the disease, and not because I think a truthful decision of the point important in determining the question of its origin. Some of my readers, however, may possibly differ from me in this opinion.

Now I come directly to the question, how did the Lofton and Aldrich families get yellow fever? or, in other words, how did this disease come to prevail at Mount Pleasant? This brings us to the old disputed matter of foreign importation, and domestic origin. So soon as it was established that the yellow fever was at Mount Pleasant, many of the inhabitants became clamorous about the salubrity of the village. Many of them were ready to stake their all upon the belief that such a disease could not originate there, and some seemed determined to prove its importation. In their ignorance, or thoughtlessness, they seemed to overlook the fact that it was about as detrimental to the town to admit that imported yellow fever could live and propagate there, as it was to acknowledge its possible generation on the spot. If the condition of the town is so changed that the disease now will propagate there after importation, then she may suffer whenever our city does, unless she will change her policy and establish rigid quarantine regulations during the existence of our epidemics. Reports of various kinds were soon in circulation. It was first asserted that Mr. Lofton, who had been butchering for the village, had been supplying beef to the *Ciscar*—an infected vessel lying off “Hobcaw Point”—and brought back the yellow fever poison in exchange. Upon a rigid investigation, no one could be found to substantiate this assertion, and the

evidence of the officers of the vessel entirely disproved the truth of the report, that Mr. L., or any one from the neighboring shores, had ever visited her decks.\* Had Mr. L. ever done so, it would, to say the least, have been singular that he should thus destroy young Aldrich, his own children and his wife, before he yielded himself a victim. Next it was said, that the seamen from the Ciscar had had their clothes washed at a farm distant four miles from the shore off which the vessel lay, and four miles from Mount Pleasant; that Mr. Lofton kept his cattle at this farm, and upon returning to the town, after some of his visits to the farm, he had brought the poison in his clothes. This rumor was as false as the preceding; and if it were correct, would be as unsatisfactory as the first, in accounting for the disease. Thirdly, a mattress had been seen upon the town beach, before the breaking out of the fever—ergo, it come from a yellow fever vessel—ergo, the morbid cause of the disease had thus been transported. Now, there were but three vessels in the harbor upon which deaths from yellow fever occurred, viz: the Ciscar, the Johannes, and the San Juan. The deaths on two of the vessels took place, as will be seen by reference to dates that I have given elsewhere, *after* the first cases of sickness appeared at Mount Pleasant. The Ciscar was the only vessel on board of which a death occurred previous to the breaking out of the disease at Mount Pleasant. The officers of this vessel most positively deny that a mattress was thrown from her; and we have no reason to doubt their statement. Fourthly, some Spanish sailors had been at Mount Pleasant previous to young Aldrich's sickness, and he had been seen speaking with them. It seems to be substantiated that Mr. Aldrich was seen speaking to some strange seamen. I have never obtained, however, any satisfactory proof that these were Spaniards, or other foreigners. Perhaps they were Spaniards. No one knows, then, from whence they

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\* While correcting this article for the press, we learn that Mr. L. served a writ on board the Koophandel—supposed by some to be an infected vessel. From the general tenor of our remarks, it will be seen that we cannot consider this a satisfactory elucidation of the origin of the disease. If disease can be thus introduced, our Port Physician would bring it for us every summer.

came. Some have drawn the inference that these men were the crew of the San Juan, who deserted after the deaths from fever took place on board of her. This is most certainly incorrect, because the deaths on this vessel occurred when Mr. Aldrich lay dangerously ill. Others affirmed that the men were from the Ciscar; and I was even told that one of our respectable pilots could substantiate the fact. This pilot I saw personally, and found that I had only traced out another falsehood. If the testimony of the officers of the Ciscar is worth anything, then we may be assured of the fact that not a single individual ever passed from the vessel to the town, either directly or indirectly. I have not found the slightest evidence that seamen from any vessel in our harbor, from an infected port, visited Mount Pleasant. At our wharves there were several Spanish vessels from healthy Mediterranean ports. It is likely that seamen from one or other of these vessels may have recreated at Mount Pleasant. If there is information that I am not possessed of to prove that seamen from an infected vessel did visit Mount Pleasant previous to the occurrence of fever at that place—and the importationists should follow such a "*phantom*"—then I would ask those of them who framed our late rigid quarantine regulations how it is that acclimated persons are allowed to pass freely from infected vessels to our city? How is it that our city did not become infected this season before Mount Pleasant? How is it that though the clothing of seamen from the Havana steamer had been secretly washed in our city, we were furnished with no disease? If the visit of men from an infected vessel to a city or town will originate disease, then *our quarantine is a farce, and it must ever be so!*

I have thus treated, with proper deference, I trust, the popular reports and suspicions as to the importation of the disease. It remains for me to pursue this portion of my inquiry by examining into the probabilities of the disease being introduced by direct atmospheric transmission. There can be no doubt as to the possibility of disease being thus introduced. We need go no farther back than the late report of Dr. Harris, of the Marine Hospital at quarantine near New York, in refer-

ence to the fever as it prevailed in the summer of 1856, at points upon the Long Island and Staten Island shores. An immense number of infected vessels, seventy-nine in all, lying, during the season, at quarantine station, and in the "Narrows," of New York harbor, furnished such an abundance of the morbid agent of yellow fever for the winds to act upon, that the poison became sufficiently concentrated upon portions of the shore line to develop many cases of yellow fever. The winds were the efficient transporting agents; the infected vessels the sources from which the noxious agent came. This occurrence was new in the harbor of New York. I cannot understand why it was manifested for the first time in the summer of 1856, except from the fact that the number of infected vessels collected at quarantine was much larger than during previous seasons. The more numerous the vessels, the closer would many of them approximate the shore, the more abundant would be the morbid material—the germs, if this expression is better liked—capable of producing disease; the more abundant the germs to be diffused and transmitted by the wind, the more likelihood of the dose necessary for producing disease reaching the shore. It will not do to say that extraordinary conditions existing upon the shore created an unusual atmosphere, which served as a nidus in which a few germs became self-multiplying; for it is proverbial that the yellow fever poison—the *living germ*—brought from the locality in which it is generated, will produce disease in a proper subject in any atmosphere. An infected vessel from a yellow fever port, lying at a wharf on the Long Island, or the Staten Island shores, will communicate disease *any summer* to persons who may come in close proximity to her. Such disease may not extend further than to those directly exposed; but this is altogether another matter. The important element, then, I take it, in originating so much disease in the New York harbor, was the *large number* of infected vessels at quarantine.

In reference to our Mount Pleasant fever, we must examine the likelihood of atmospheric transmission from the quarantine ground, and from the vessels that took position on the



Cooper River. Can we draw anything like a parallel between the condition of things at our quarantine in '1857, and that of New York in 1856? Most assuredly not. At our quarantine ground we find but three or four vessels from yellow fever ports, and but *a single one of these known positively to be infected*. Now, in the whole history of yellow fever, can a single instance be pointed to, where the infectious material from one, two, or three vessels was ever transmitted two and a half miles? Certainly it has never been contended that Charleston was indebted to atmospheric transmission from the quarantine ground for any of the epidemics from which she has suffered, notwithstanding there have been, again and again, many more infected vessels at quarantine during particular summers than were there this season, and notwithstanding that the wind has been frequently favorable for transmission. Indeed, the strongest advocates of the importation of the disease with us have accounted for our epidemics, *very satisfactorily to themselves*, by the presence of the infected vessels, or their cargoes, *at our wharves*. The quarantine ground is north of the James Island shore, and off Fort Johnson, only a mile from one, and a mile and three-eighths from the other. Neither of these situations have ever suffered from atmospheric transmission of the yellow fever poison. The James Island shore has not suffered this season, although as will be seen by referring to the table of winds, for which I am indebted to our City Register, a north east wind (usually the strongest wind in our harbor) was by no means wanting during the months of July and August. Our city did not furnish a single case of yellow fever before the disease at Mount Pleasant had made some progress, notwithstanding that the wind was frequently from the south east during the month of July, after the arrival of the Ciscar. Yellow fever has certainly never been transmitted atmospherically to Mount Pleasant from the quarantine ground before this season. It has never been transmitted there in this way from our infected city. The south west and the west winds are our most common summer winds, and by these the yellow fever germs must have been transported long before the summer of 1857, were such a thing possible. This appears to me the most



logical view to take of the question of a supposed atmospheric transmission of yellow fever from the quarantine ground to Mount Pleasant. I do not expect, however, every one to agree with me in this opinion. The extreme importationists may derive much satisfaction by learning from the table that during the month of August the wind prevailed from the south west. I have already said that the south west wind was one of our prevailing summer winds. Its prevalence, then, previous to, and at the time of the breaking out of the Mount Pleasant fever, would appear to my mind *only as a coincidence*. If the circumstance be a comforting assurance to others—a prop to their faith—they are welcome to the benefit of it. But, then, I would ask, how must we explain the fact that *not a single front house in the town suffered from the disease?* The exponent of the importation sentiment in our city, at a late meeting of our Medical Society, said, that for aught we knew, the yellow fever germs might travel “*sometimes with the wind, and sometimes against it.*” Well, perhaps he, or some one else, will say, that for aught we know, these germs may travel towards a particular point, sometimes in a horizontal direction, and sometimes, like slowly-moving projectiles, by performing a parabolic curve. Surely, if starting from quarantine, they reached Mount Pleasant, either with or against the wind, they must have selected the latter mode of progression, for in no other way can we account for their visit to houses retired from the beach, and their entire disregard of those along the water. It may be surmised that there were no fit subjects for the disease living in front houses. This would be an error. I am cognizant of the fact that a number of *totally unacclimated* persons did live in front houses.

Next, I must examine the possibility of atmospheric transmission from infected vessels lying on the Cooper River. There were but three vessels to which any suspicion could attach. These were the Ciscar, the Adella, and the San Juan. But one of these, the Ciscar, was known to be infected upon entering our harbor, and while lying at quarantine. The Adella arrived from Havana, an unhealthy port; and this is the only reason why she is classed in the category of infected vessels. The

San Juan arrived from a healthy port, nevertheless she was quarantined like any vessel coming from an unhealthy port. After leaving the quarantine ground, and anchoring up the river, two of her crew were taken with fever. I consequently class her also with the infected vessels. Now I can at once disabuse two of these vessels from any possible connection with the Mount Pleasant Fever, for the simple reason that one of them, the Adella, passed from the quarantine ground into the river on the 12th of September, and the other had no sickness on board until the 30th of August, both of these dates being, as the reader will remember, after Mr. Aldrich's seizure, to say nothing of Mr. Lofton's infant. The Ciscar, then, is the only vessel to which our attention need be directed. It must be remembered that the cases of fever on board of her were sent to the Lazaretto, and that she was twice cleansed and fumigated at the quarantine ground, under the direction of the Port Physician.\* After being *forty days* at quarantine, this vessel, on the 17th of August, moved into the river, and, in the language of the Port Physician, "anchored between Bennett's wharf and Hog Island Channel, where she remained three days. She was then removed to a position higher up the river, opposite 'Hobcaw Point.'" In considering the probability of atmospheric transmission from this vessel, while occupying either of the above positions, many of the arguments which were urged against the likelihood of such transmission from quarantine, acquire additional strength. Here was but a single vessel; she had been so cleansed and fumigated that the infectious agent must certainly have been diminished in quantity, if not entirely dissipated; the wind, which was south west during the three days that she remained between Hog Island Channel and Bennett's wharf, was not favorable for transmission to Mount Pleasant; and from the time the vessel took her second position off "Hobcaw," to the end of the month, the winds were entirely

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\* After writing the above, I was informed by the Port Physician that twelve days after the removal of the sick to the Lazaretto, three other cases of fever occurred on this vessel. One of these died. None of them were sent to the Lazaretto.

opposed to transmission in the direction of the town. The argument having reference to the exemption of the front houses of the town from disease, still holds good; so that the only "*phantom*" left for importationists to embrace, is the fact that the *Ciscar*, when off Hog Island Channel, was somewhat nearer to Mount Pleasant, than when she was at quarantine.

Notwithstanding, then, that I have full confidence in the possibility of the atmospheric transmission of the yellow fever poison, under certain circumstances, I cannot, after calm reflection, believe that the disease was thus introduced by the *Ciscar*. I have no doubt that many of my readers will think I have devoted too much attention to so unlikely a supposition. It would, perhaps, have been enough for me to say that during every season, for the last ten years in which Charleston has suffered from yellow fever, steamboats have passed every hour or two from the infected city to Mount Pleasant wharf. It does appear a little singular that fever should break out and spread at Mount Pleasant the first summer that an infected vessel takes a position up the Cooper River, and very soon, too, after she moves there. But how often do we see equally strange coincidences? We should ever be careful lest we mistake a sequence for a consequence. The time of the outbreak of the fever, when we reflect, was the time that fever usually appears in our latitude. In connection with this point, I would advert to some occurrences in our harbor and elsewhere.

The reader will remember my reference to the cases of yellow fever sent to the Marine Hospital on the 27th of August, from the *Johannes*, a vessel lying on the Ashley River. I said then that these were considered traceable to quarantine. I wish now to examine this matter more fully. To furnish my readers with all the facts pertaining to the point, I cannot do better than give the following extract from the late published report of our Port Physician:

"In regard to the cases on the galliot *Johannes*, Capt. Cooper. She arrived on the 26th of July from Emden, Hanover, after a passage of sixty-three days, with ten in crew and forty emi-

grants. One emigrant had died at sea, and another just after crossing the bar; four others were ill with typhus fever; one of them died the next morning at quarantine.

The emigrants, both sick and well, were sent to the Lazaretto; no new case occurred among them, and the sick recovered.

The vessel was cleansed and fumigated, and on the 11th of August went alongside of the barque Koophandel, Captain Hielmstrom, (the latter having then been forty-five days at quarantine,) for the purpose of discharging her ballast into the Koophandel.

The Koophandel arrived the 27th of June, from Rio de Janeiro, an infected port, after a passage of forty-nine days; ten in crew, all well—the captain affirming that there had been no sickness on board whilst at Rio, or during the voyage. The two vessels remained lashed together for six days. The Koophandel left the quarantine, and went up Ashley River on the 17th August; the galliot followed on the 24th, anchoring in the stream, about three hundred yards from the foot of Broad-street.

The captain and two of the crew of the galliot were taken with typhus fever on the 19th August. They were removed to the Lazaretto, where the captain died. On the 27th two others of the crew entered the Marine Hospital with yellow fever. On the 28th they were sent back to the vessel, on board of which one died the next morning. The other was then removed to the Lazaretto, where he also died. The rest of the crew were taken to the Lazaretto, and remained there till the 1st October, without any sickness.

The following affidavit has since been made by Captain Heilmstrom, viz:

STATEMENT OF THE HEALTH OF THE CREW OF THE BARQUE KOOPHANDEL.

The vessel remained in Rio for over two months.

Captain C. A. Heilmstrom—Has had yellow fever about twenty-five years ago in Havana.

First Mate—Never has had yellow fever.

Second Mate—Was sick for two days in Rio.

Carpenter—Never has had yellow fever, and is unacclimated.

Cook—Never had yellow fever; was unwell for a week in the Hospital at Rio.

Steward—Died of yellow fever in Rio.

H. Ipson, sailor—Has been well since leaving Amsterdam; does not remember if ever he has had yellow fever.



H. Vanderzooag, sailor—Was in the Hospital at Rio four days.

G. Vanderzooag, sailor—Has had yellow fever.

A. Ortzooag, sailor—Unwell in Rio with bilious fever.

R. Meeyer, sailor—Has had intermittent fever in Rio.

Boy, sailor—Was three days in the Hospital at Rio.

The Carpenter, since his arrival at this port, has been taken sick with a severe cold by sleeping on deck.

During the whole passage from Rio to Charleston, forty-nine days, I hereby certify that not even a single case of sickness has occurred on board of my vessel."

[Signed]

C. A. HIELMSTROM.

Charleston, Sept. 24, 1857.

From this evidence I cannot agree with those who consider it *proved* that the *Johannes* got her fever from the *Koophandel*. There were certainly several subjects for yellow fever on board the *Koophandel*; and if she became infected at Rio, how is it that these men did not sicken either on the voyage, or during her stay at the quarantine ground in our harbor? Admitting, even, that all those reported by the captain as sick at Rio with different diseases, were sick of yellow fever, there remains still the first mate and the carpenter, who were perfectly unacclimated. And it may even be doubted if the captain himself was not a subject for yellow fever; for having had fever twenty-five years ago would not have exempted him from another attack, unless he had since lived, or been frequently in a yellow fever section, so as to have preserved his acclimation. It will be observed that the *Johannes* had been in such a condition that typhus fever was generated on board, and that she *transferred her ballast into the Koophandel*. Who knows what may have been the effect of an August temperature, in our harbor, upon the materials which in another latitude had generated the typhus fever poison, and particularly when there was the additional influence arising from disturbing the vessel's filthy hold? True, the *Johannes* had been cleansed and fumigated, but could she in this way have been entirely freed from the disease-producing-filth while her ballast remained in her? I do not assert, but I merely suggest the possibility of the same materials on board of a vessel generating, under particular conditions, one poison, and, under

other conditions, another poison, each of these capable of developing a distinct disease.

I come to another vessel, the San Juan. I previously referred to her as coming from a healthy port, and remaining at quarantine from the 12th of July to the 27th of August, when she went up the Cooper River, and anchored off the upper wharves. No one has told us where this vessel got her fever. She was never lashed alongside of the Koophandel, or other infected vessel, to discharge or take in ballast; and yet, yellow fever appeared on board of her only two or three days after it appeared upon the Johannes, lying on the other river, and two days after young Aldrich was taken sick at Mount Pleasant. I cannot affirm myself how fever originated on this vessel. The physician, however, who attended the fever cases on board of her, certified to the vessel being in a very filthy condition. The San Juan arrived at quarantine only four days after the Ciscar, *the positively infected vessel*. I cannot say how near these vessels lay to each other; but, as is well known, our quarantine ground is quite limited in extent. Now, if atmospheric transmission, from a single vessel, is possible at the great distances that some would infer, then perhaps there will here be found another "*phantom*" for some to follow. The Ciscar, though, left the quarantine ground on the 17th of August. The San Juan remained perfectly healthy for at least twelve days after this. If the disease did not originate on board of her, I can only say that she was unfortunate indeed, to have resisted for more than a month the infectious agent at her very door, and finally to have received it from a source unknown and undreamed of!

I cannot leave this portion of my subject without begging my readers to remember my reference to the almost simultaneous appearance of the disease in our locality this season at three widely separated points. This is indeed a significant fact, and one that would be singular upon the supposition of the yellow fever germs being imported into our harbor. To travel in opposite directions, under the most diverse influences, and to reach their destination at the same time, would be an exhibition on the part of these mysterious agents, even if we en-



dowed them with intelligence, of qualities truly marvellous! I might go farther, and point to another significant fact bearing upon this same point. The bills of mortality of the two cities of Charleston and New Orleans, up to the middle of September, proved them to be exempt from yellow fever. But after this date we find the disease appearing in both of these cities about the same time, and prevailing to a very limited extent, proportional in each to their population. Is it likely that germs of a foreign disease should have arrived simultaneously in both places? If they did, it was a remarkable coincidence.

I must now allude to some local conditions of the town of Mount Pleasant, to which suspicions concerning the origin of the disease might naturally be attached. At the starting point in my investigations, I found many of the villagers disposed to attribute the sickness of the Lofton family (none of them had as yet suspected that young Aldrich died of the same disease) to a particular house in which they had been living previous to occupying their present abode. This house the family had been in for six or eight weeks, and they had left it only two days, when the infant child was taken sick. The house had a bad reputation, because last year, towards the end of September, the proprietor, Mr. Morrison, and his household, suffered from a severe form of fever. Two of his servants died; one of them threw up black matter before death. The disease had been called "bilious congestive fever." A city physician had been heard to say, that in Charleston he would call the disease yellow fever. (I have since conversed with this physician, and also with the physician at Mount Pleasant, who attended some of the Morrison people. From the evidence given by these gentlemen, I am clearly of opinion that some of this disease was yellow fever. The city physician assures me that he has no doubt of such being the fact. An autopsy of one of the servants who died with black vomit revealed the yellow liver of Louis. The type of other cases that recovered was unequivocal. Up to the occurrence of these cases, there had been no yellow fever at the village, imported from Charleston; afterwards, two patients died with

the disease supposed to have been contracted in the city.) Some others were inclined to think that the disease originated in the newly constructed dwelling that Mr. Lofton and his family afterwards occupied. A lot fifty feet wide, by one hundred and fifty deep, had been recently cleared of the small vegetation (a few bushes only) that had been undisturbed for years; a dwelling and a slaughter-house had been erected thereon, and hogs turned into the enclosure. Filthy accumulation, of course, to a certain extent, ensued, and this was considered potent enough for the generation of malignant disease. I examined both of these premises. The house of Mr. Morrison was situated in a cup-like depression of the land, so that the surface-water would naturally run under the building. There was a closed basement and a brick flooring to the dwelling. Although the surface-water, as I said, naturally ran under the house, no water remained stagnant upon the surface, nor could I see evidence of much moisture about the basement. In a low lot directly opposite this house, and not twenty feet distant, I observed the remains of what had been a large pile of pine logs, which had been lying there for two years or more. I could see no evidence of much decomposition going on in the pieces of timber then remaining, nor did I detect any offensive emanation coming from these. Upon premises number two, I could detect nothing worthy of notice. There was no filthy accumulation, and no putrescent odor. I understood, though, that these premises had been cleaned since the outbreak of the fever. Continuing my inquiries, I found that there had been, within a few years, at the northern extremity of the town, a considerable reclamation of marsh-land. Some three or four acres of this had been walled in, and the filling up done chiefly with *pine saw-dust and small bushes*. A small saw-mill had been erected on a part of this made ground, and a small lumber-yard now existed, as the natural consequence of the mill. Next, my attention was drawn to a lot adjoining the residence of Mr. Aldrich. I found that the surface of this lot had been covered, some time previous to the commencement of the disease, with *green pine-tops and animal manure*, to prevent, it was said, the sand

being blown away by the fresh breezes from the water-side. Several persons testified to the fact that the emanations from this lot, during the dessication of the material deposited, had been quite offensive. Lastly, I was made acquainted with a supposed hygienic regulation of the council of the town. During the month of July all the owners or occupants of lots are required to cut down the weeds and small vegetation which had grown up since the last year. These, together with the sweepings of the yards, are removed out of the town. Generally, these collections of vegetable and animal remains had been disposed of by throwing them into the creek, or by depositing them upon parts of the beach at low water, so that the tide might finish the work begun by the scavenger. The present season, though, and to a slight extent the season previous, another plan had been adopted. The scavengers removed the remains outside of the town, and deposited them in separate heaps just within its wooded border. Under the influence of heat and moisture, this vegetable and animal matter was thus left to decompose. The olfactories of many of the inhabitants soon discovered that this work was begun. Several gentlemen informed me that no better guide to these heaps could be had, than the putrescent odors which they emitted. Very properly, these piles had been burned by order of the council, so soon as the disease became manifest; and on this account I could only see the positions they had occupied. Some of these spots were rather deep in the woods, but two of them were found just upon the border of the town, if not actually within it. One of these was at the eastern extremity of an open space which was closed in on the west by the part of the town that seemed to suffer most from the pestilence. Just where the main street met this space on the west, was situated the house of Mr. Morrison; immediately across the street was Mr. Gregorie's lot; not far from this, and a little to the north, lived Mr. Thompson, who died in the city of the disease contracted at the village; to the south of Mr. Gregorie's, was the dwelling of Mrs. Whitesides; and to the south of this the Lofton house. In one house, however, situated very near to the spot where the decomposing heap had been, there was no disease, although

several of the inmates were children, and consequently subjects. The occurrence of so many cases in a particular locality may have been accidental, or explicable from the fact that there resided there a number of subjects entirely unacclimated, as were the Lofton people, and Mr. Thompson and his servant, &c. It seems to me more reasonable thus to explain the sickness last year in Mr. Morrison's household, than to attribute it to anything connected with his dwelling. There were comparatively few strangers in the town last year, and none others, I believe, than the Morrisons in this immediate locality. Mr. Morrison, though an old inhabitant of the place, had, previous to last summer, been absent in the interior for a good many years. Most of his family, and also his servants, were entire strangers. Mr. M. had not hesitated to visit the city during the day, when business called him, while the yellow fever was epidemic here; neither the members of his family, however, nor his servants, ever came to the city. The disease attacked the servants first, but Mr. M. also suffered a severe attack at a later date.

I have thus alluded, as concisely as I could, to all the local conditions to which suspicion could possibly attach. Some may think that I have referred to circumstances too insignificant to be mentioned. I have thought it best to err on the safe side, and let the profession judge for themselves the value of the details that I have given. If asked my own opinion in reference to the origin of the disease, I would say, unhesitatingly,—and with deep regret that I have to take such a view,—that *so far as my information enables me to form an opinion, I believe the disease to have been of local origin.* If asked, in the next place, to what particular local cause I would attribute it, I could not answer so promptly. I have shown that the most common-sense laws of health were violated in the town. I have pointed also to the restless disposition to progress exhibited in several ways by the people of the town. Such a disposition often entails upon man a curse, as well as a blessing. If the people of Mount Pleasant want a city, they must have it with a city's ills. Local conditions and alterations, such as I have alluded to, have many times



before to-day been said to produce yellow fever. Vegetable decomposition and ligneous decomposition have been considered efficient causes, by observers much more far-seeing than myself. And although I may reserve the right ever to have an opinion, I cannot feel warranted in considering the observations of all others who have gone before as worthless. It may be true that we often see yellow fever springing up and prevailing where there is an absence of such visible agencies as I have referred to; but may not invisible materials sometimes furnish like products with visible ones? That there is a mysterious something generated in certain localities, under certain contingencies, is indisputable. This has as yet eluded our grasp. It may do so forever. We may be always in doubt as to the materials from which it is elaborated, or as to the special influences which must operate upon these materials to develop the agent. But on this account I can see no reason to deny that the agent is generated or developed in special localities where the disease is found. It is often philosophical to doubt. It is unphilosophical to assume that yellow fever is not generated in our latitude because the meteorology of all sickly seasons does not correspond. Such prominent and conspicuous phenomena as our senses can appreciate may be found in sickly seasons widely differing, and yet numerous hidden and effective forces be actively elaborating a fixed principle, capable of producing a fixed disease. It is unphilosophical to reason by exclusion, and decide upon importation as the true origin of yellow fever with us, because we cannot grasp the mystery of germ-birth at our door. Would to God that facts did warrant us in denying the frequent, if not the occasional origin of yellow fever with us. But they do not. The opposite opinion has never been, and cannot be maintained with a semblance of reason, except by denying the *individuality* of the disease. If men in our day will revive the fallacies once ably contended for by Rochoux; or worse than this, if they will assert the existence of one kind of yellow fever that is exotic, and therefore contagious, and another kind that is domestic, or "*imitative*," and by consequence non-contagious, while they feel satisfied thus to escape



the thrusts of argument, they must expect to be looked upon as followers of something distinct from truth.

#### COURSE OF WINDS DURING THE MONTH OF JULY, 1857.

1st, N. W.; from 2d to 5th, inclusive, N. E.; 6th and 7th, S. E.; 8th, S. E. and N. W.; 9th, N. E.; 10th and 11th, N. E. and E.; 12th, N. E. and S. E.; 13th, S. W. and S. E.; 14th, N. W. and S. E.; 15th, S. W. and N. E.; 16th, 17th and 18th, N. E.; 19th and 20th, S. W.; 21st, N. W. and S. W.; 22d and 33d, S. W.; 24th, S. W. and S. E.; 25th, E. and S. E.; 26th, S. W.; 27th and 28th, S. E.; 29th, 30th and 31st, S. W. Prevailing S. E.

#### COURSE OF WINDS DURING THE MONTH OF AUGUST, 1857.

1st and 2d, S. W.; 3d and 4th, S.; 5th and 6th, S. W.; 7th, 8th and 9th, S. E.; 11th to 19th, S. W.; 20th to 22d, N. E.; 23d to 25th, S. W.; 26th, E.; 27th, S. E.; 28th, and 29th, S. W.; 30th and 31st, N. E. Prevailing S. W.

#### RELATIVE POSITIONS AND DISTANCES OF PLACES NAMED.

From Southern extremity of city to quarantine ground,	-	0 $\frac{3}{4}$ miles, S. E.
" Quarantine ground to James Island shore,	- -	1 mile, S.
" Quarantine ground to Mount Pleasant village,	- -	2 $\frac{1}{2}$ miles, N. E.
" Upper wharves of city to Mount Pleasant village,	- -	2 $\frac{3}{4}$ miles, E.
" Mouth of Hog island channel to Mount Pleasant village,	- -	1 $\frac{3}{4}$ miles, E.
" Mouth of Hog Island channel to city,	- - -	1 mile, W.
" Hobcaw Point to Mount Pleasant village,	- -	2 $\frac{1}{2}$ miles, S. E.
" Hobcaw Point to upper wharves of city,	- -	2 miles, S. W.

*made*





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